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EXAMINER

SHAH, NILESH R

ART UNIT

PAPER NUMBER

2127

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/752,586

Applicant(s)

KOZUCH ET AL.

Examiner

Nilesh Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/20/04, 8/23/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-31 are presented for examination.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 14 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong-Insley (U.S. Patent # 6,131,166).
4. As per claim 1, Wong-Insley teaches the invention as claimed including a method of providing power management comprising of:

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monitoring utilization of a platform device by one or more virtual machines (col. 3 lines 1-14; col. 3 lines 35-45; col. 3 lines 60-63; col. 4 lines 5-9; col. 23 lines 45-55);  
managing power consumption of the platform device based on the monitoring (col. 3 lines 1-14).

5. Claims 14 and 29 are system and apparatus claims of claim 1, they are rejected for the same bases of claim 1 above.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. Claims 2-13, 15-28, 30- 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong-Insley (6,131,166) in view of Oprescu et al (hereinafter Oprescu) (5,752,046).

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8. As per claim 2, Wong-Insley teaches a method wherein monitoring further comprises determining resource allocation of the platform device to each of said one or more virtual machines when (col. 23 lines 47-55).

Wong – Insley does not specifically teach the use of one or more devices being either started or stopped.

Oprescu teaches the use of one or more devices being either started or stopped (col. 9 lines 1-12, Fig 2).

It would have been obvious to one skilled in the art at the time the invention was made to combine the teachings of Oprescu and Wong-Insley because Oprescu's allocation of resources based on either the virtual machine is started or stopped would improve the distribution of resources in Wong-Insley's system by having more accurate count based on the started or stopped virtual machine.

9. As per claim 3, Wong-Insley teaches identifying a change in operation of said one or more virtual machines (col. 10 lines 7-12, col. 10 lines 48-51).

Oprescu teaches a method of determining resource allocation of the platform device to said one or more virtual machines based on the change in operation (col. 7 lines 47-53, col. 8 lines 45-59).

10. As per claim 4, Oprescu teaches a method further comprising notifying a guest operating system before modifying a power consumption state of the platform device (col. 14 lines 50-65, col. 9 lines 1-12).

11. As per claim 5, Oprescu teaches a method wherein the platform device is a power manageable platform device (col. 10 lines 9-47).
12. As per claim 6, Oprescu teaches a method wherein the platform device is a non-power- manageable platform device (col. 10 lines 9-47).
13. As per claim 7, Wong-Insley teaches a method further comprising:  
observing that one of said one or more virtual machines is quiescent (col. 23 lines 35-46, col.12 line 40-5); and  
saving the state of the one of said one or more virtual machines(col. 10 lines 21-40).

Wong – Insley does not specifically teach the use of one or more devices being either started or stopped.

Oprescu teaches the use of one or more devices being either started or stopped (col. 9 lines 1-12, Fig 2).

identifying a decrease in power available to a computing platform (col. 8 line 65 – col. 9 line 14).

14. As per claim 8, Wong-Insley teaches a method further comprising:

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observing that none of said one or more virtual machines is quiescent and determining which subsets of said one or more virtual machines can remain active without exceeding the power available to the computing platform(col. 23 lines 35-46, col.12 line 40-5, col. 13 lines 20-24); selecting a subset that has a maximum value to a user from the subsets of said one or more virtual machines (col. 13 lines 9-14, col. 13 lines 44-50, col. 14 lines 20-25); and saving the state of each virtual machine that is not included in the subset that has the maximum value to the user (col. 13 lines 9-14, col. 13 lines 44-50, col. 14 lines 20-25).

Wong – Insley does not specifically teach the use of one or more devices being stopped.

Opreescu teaches the use of one or more devices being stopped (col. 9 lines 1-12, Fig 2, col. 6 lines 30-41).

15. As per claim 9, Wong-Insley teaches a method wherein the subset that has the maximum value to the user is selected based on a policy specified by the user (col. 13 lines 9-14, col. 13 lines 44-50, col. 14 lines 20-25).

16. As per claim 10, Wong-Insley teaches a method further comprising receiving notification of the policy from an application running in one of said one or more VMs (col. 14 lines 20-25, col. 19-30).

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17. As per claim 11, Oprescu teaches reconstructing the state of upon receiving a resource request from said one or more virtual machines (col. 5 lines 43-48, col. 6 lines 65- 10, col. 9 lines 1-12).
18. As per claim 12, Oprescu teaches a method a method wherein guest operating system that lacks the capacity to handle power-management signals sent by a computing platform (col. 10 lines 9-47).
19. As per claim 13, Wong-Insley teaches preserving the state if the power-management signal indicates that the computing platform will be powered down (col. 3 lines 1-14, col. 23 lines 45-55,col.12 lines 54-57).

Wong- Insley does not teach power management signals sent by a computing system.

Oprescu teaches intercepting a power-management signal sent by the computing platform to the guest operating system (col. 5 lines 43-48, col. 6 lines 65- 10, col. 9 lines 1-12).and

20. Claims 15-16 are system claims of claims 2-3; they rejected for the same bases of claims 2-3 above.



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21. Claim 17 is an apparatus claim of claim 14; it is rejected for the same bases of claim 14 above.
22. Claims 18-28 are apparatus claims for 2-13; they are rejected for the same bases of claims 2-13 above.
23. Claim 30 is computer readable medium claim of claim 7; it is rejected for the same bases of claim 7 above.
24. Claim 31 is computer readable medium claim of claim 13; it is rejected for the same bases of claim 13 above.

***Response to Arguments***

25. Applicant's arguments filed 8/23/04 have been fully considered but they are not persuasive.
26. In the remark applicant argue in substance that the prior art cited fails to teach (a) monitoring utilization of a device by one or more virtual machines.
27. Examiner respectfully disagrees with applicant remarks. As to point (a) Wong-Insley teaches monitoring utilization of a device (col. 3 lines 1-14; col. 3 lines 35-45; col. 3 lines 60-63; col. 4 lines 5-9) by one or more virtual machines (col. 23 lines 44-55).

***Conclusion***

**28. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nilesh Shah whose telephone number is (571)272-3771. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nilesh Shah  
Examiner  
Art Unit 2127

NS  
January 10, 2005

  
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